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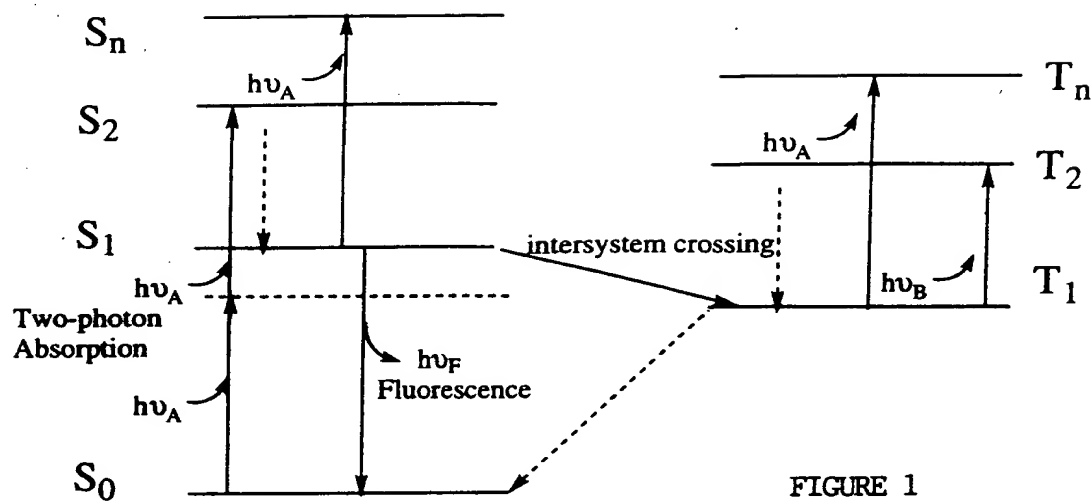


FIGURE 1

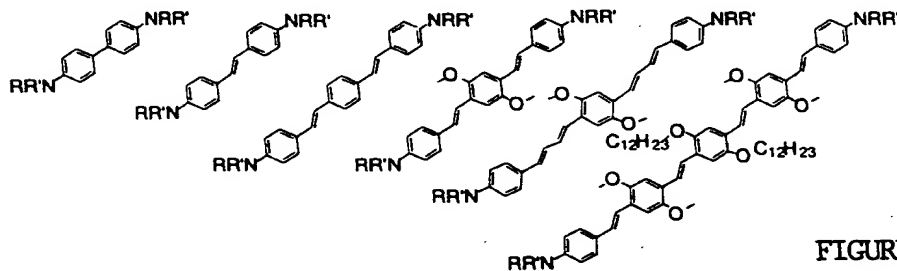
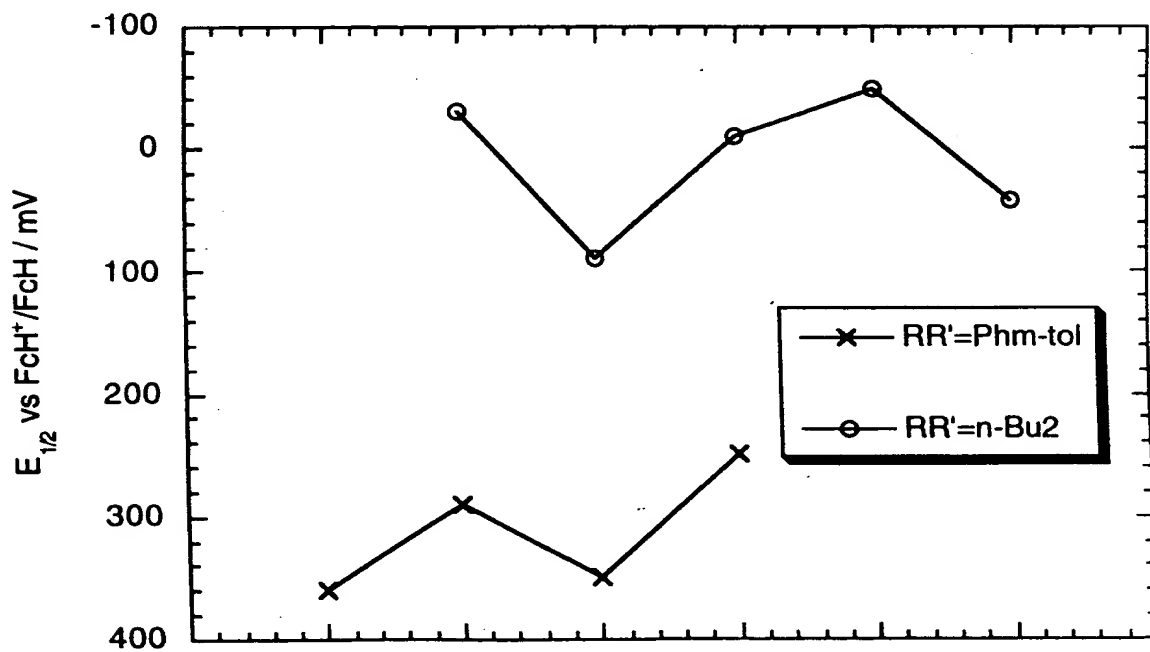


FIGURE 2

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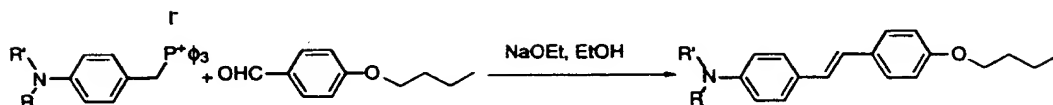
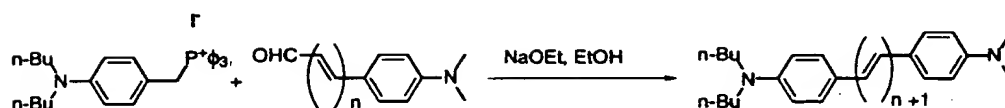
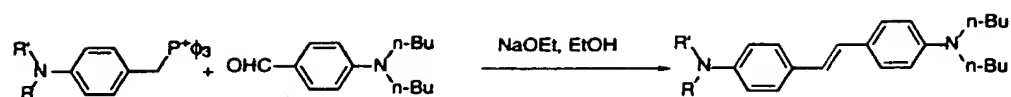


FIGURE 3

Scheme: Synthesis of piperidine stilbenes.

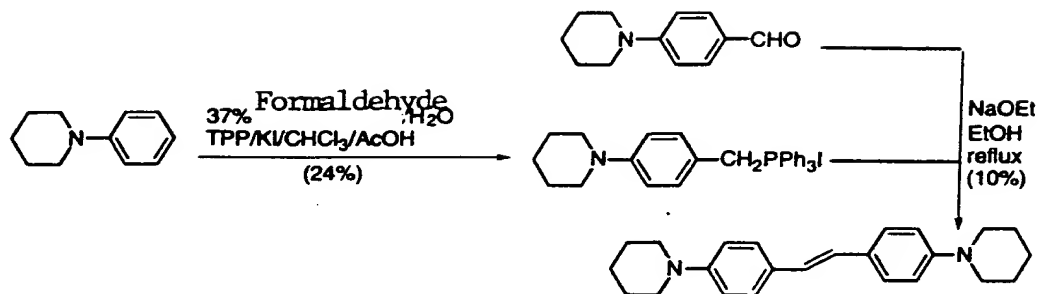


FIGURE 4

Scheme: Synthesis of 4-[N-(t-Butoxycarbonyl)]-piperazine-benzaldehyde.

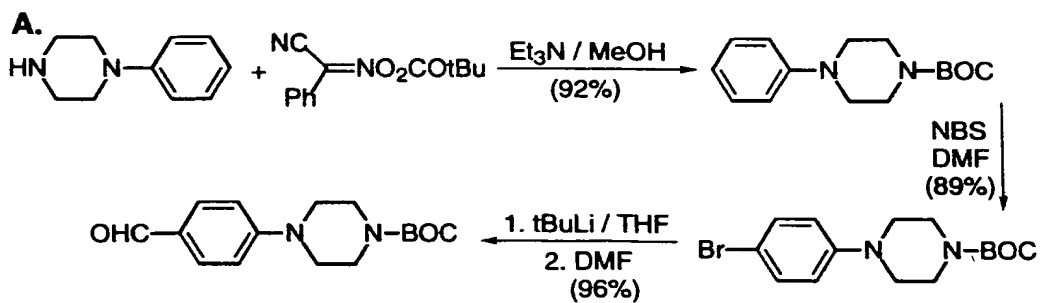


FIGURE 5

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FIGURE 7

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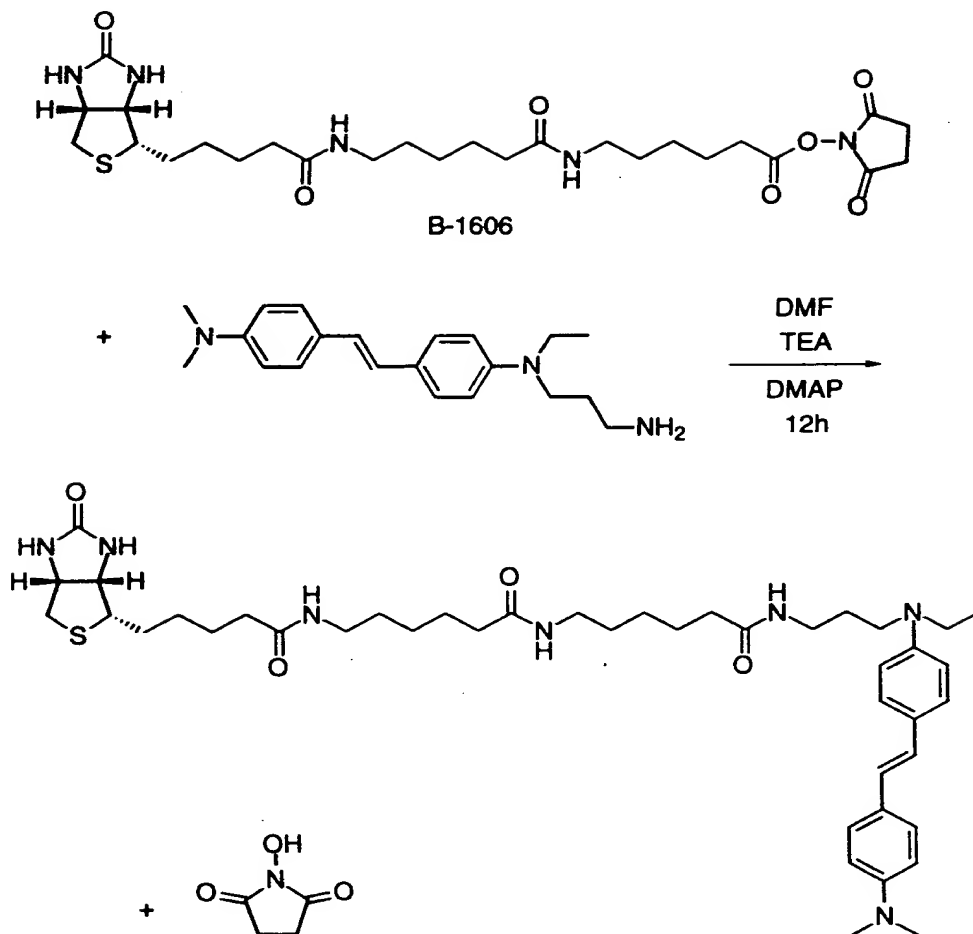


FIGURE 9

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

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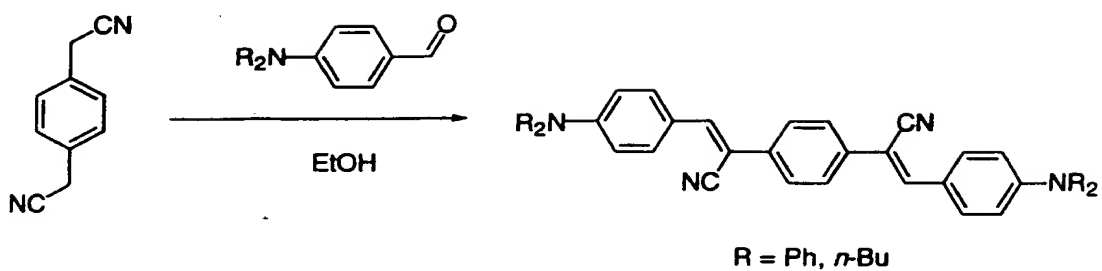


FIGURE 10

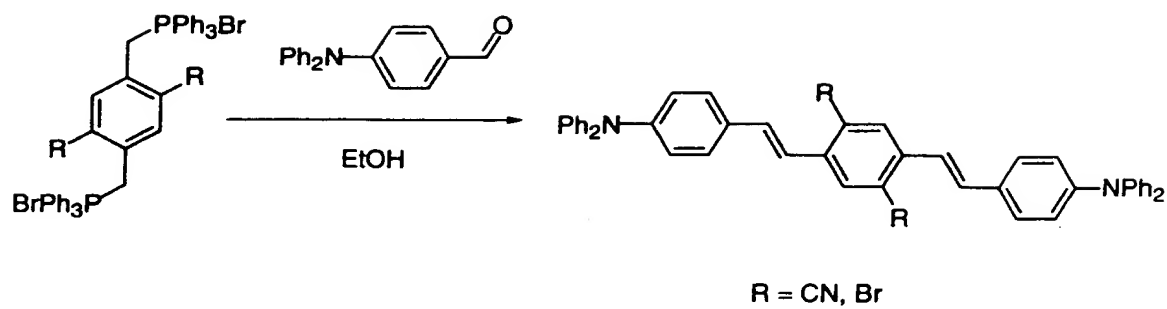


FIGURE 11

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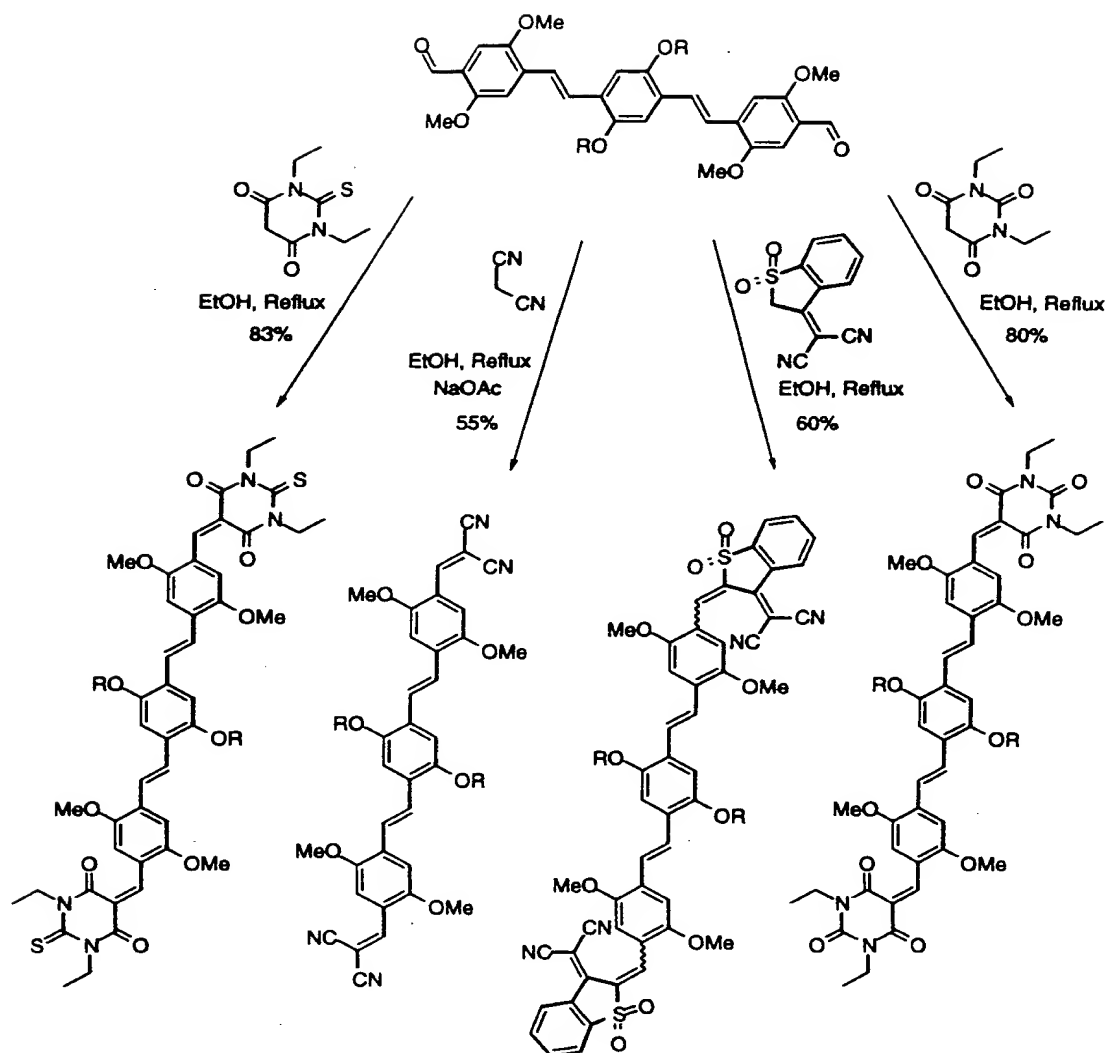


FIGURE 12

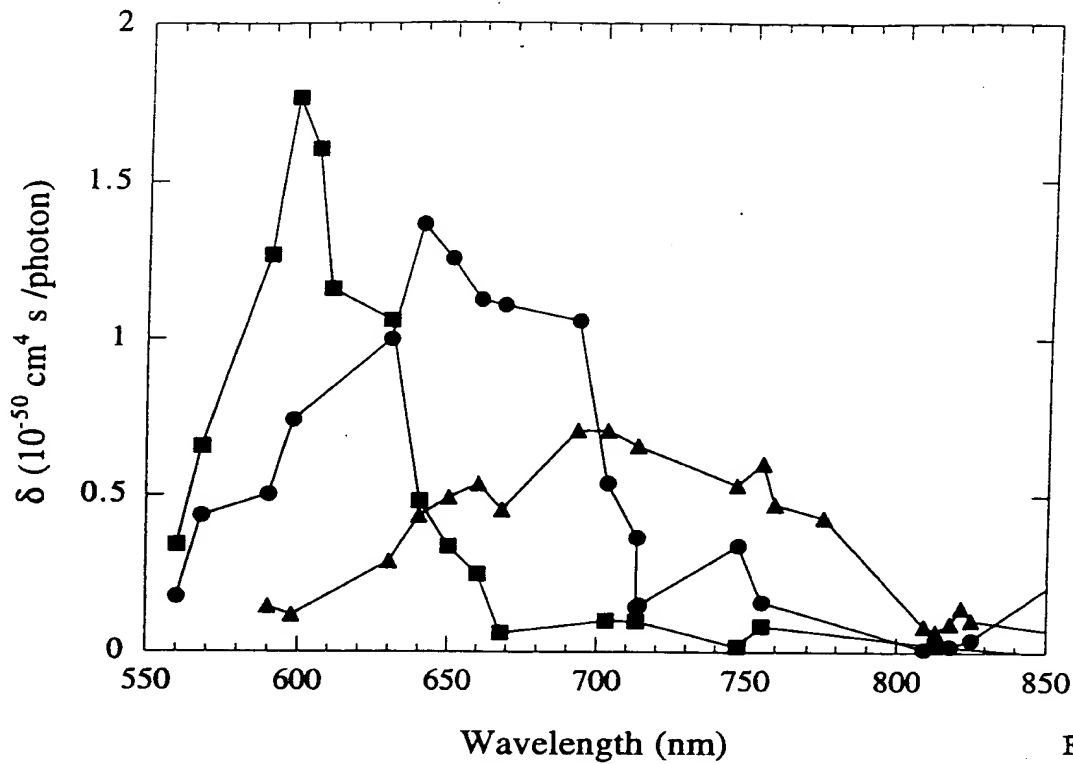


FIGURE 13

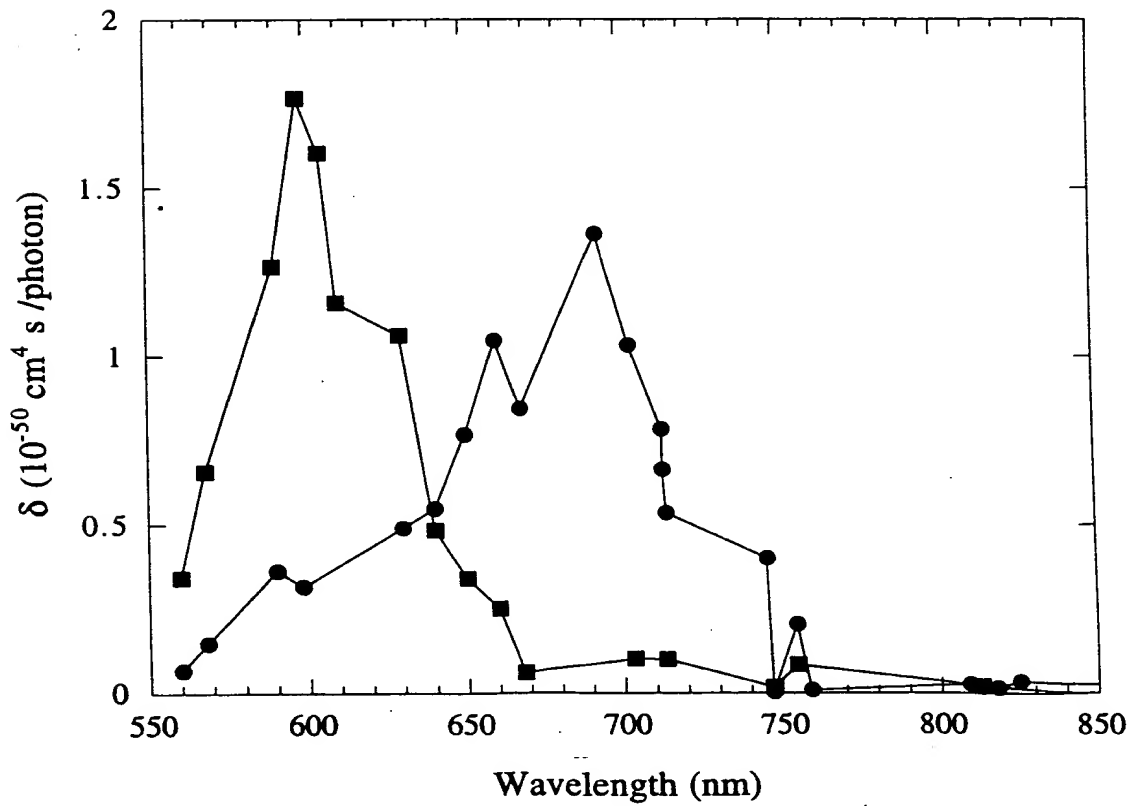
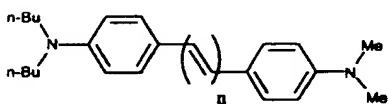
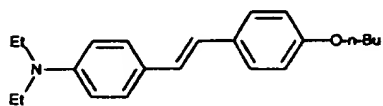
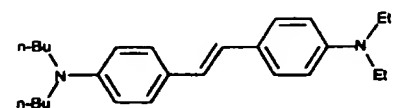
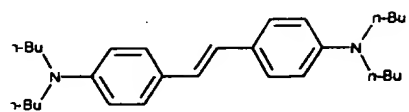


FIGURE 14

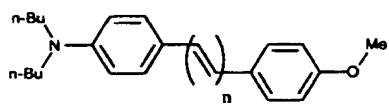
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Compounds

Exposure time (sec) required for polymerization



n=2



n=2

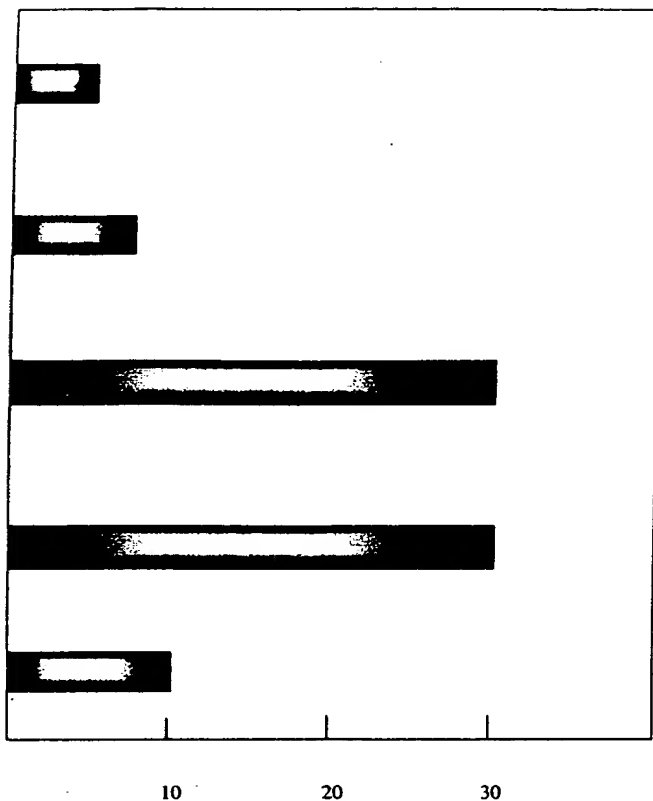
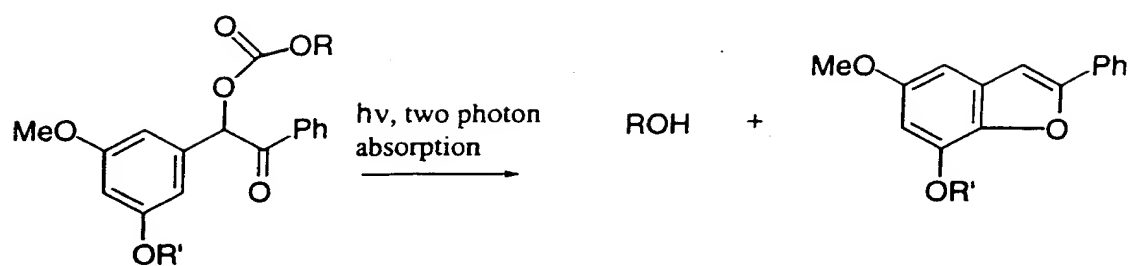
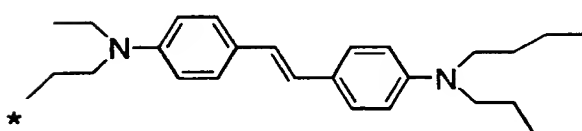
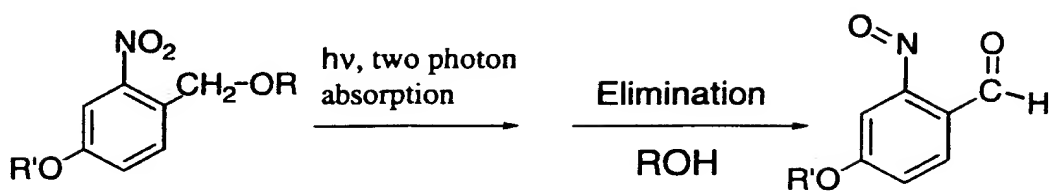


FIGURE 15

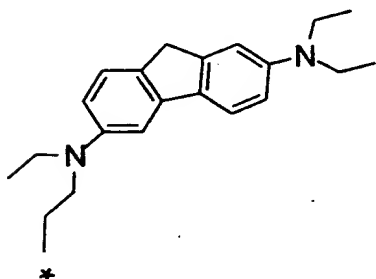
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or



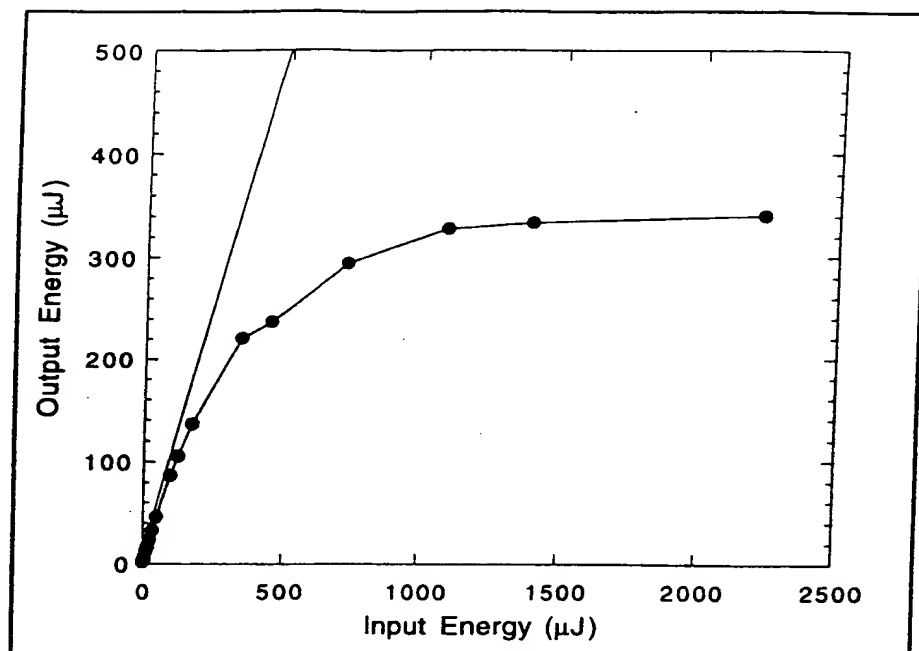
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where * is the point of attachment.

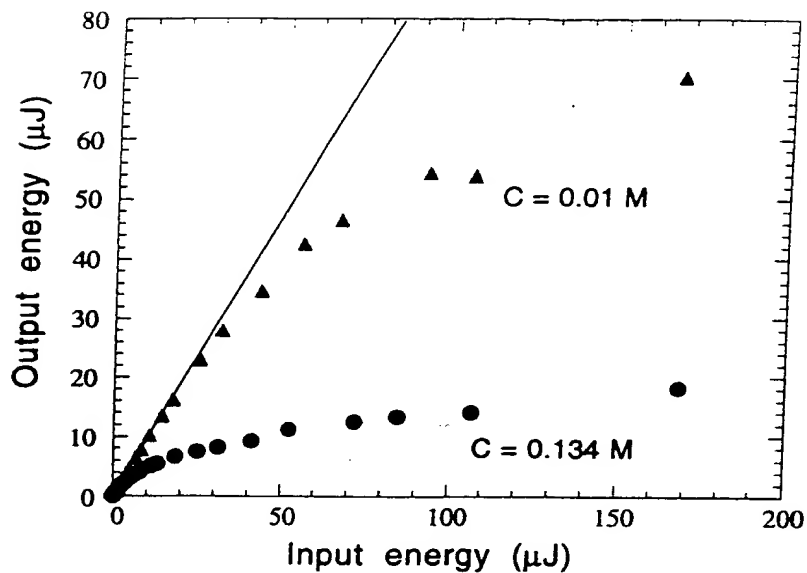
FIGURE 16

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Optical limiting by two-photon absorption in 4-dimethylamino-4'-dibutylaminostilbene (MBDAS) (points).

FIGURE 17



Two-photon optical limiting responses of 0.01 and 0.134 M solutions of 4,4'-bis(dibutylamino)stilbene for ~ 5 -ns, 600 nm pulses. The straight line corresponds to the linear transmission (96%) of the 0.134 M solution.

FIGURE 18

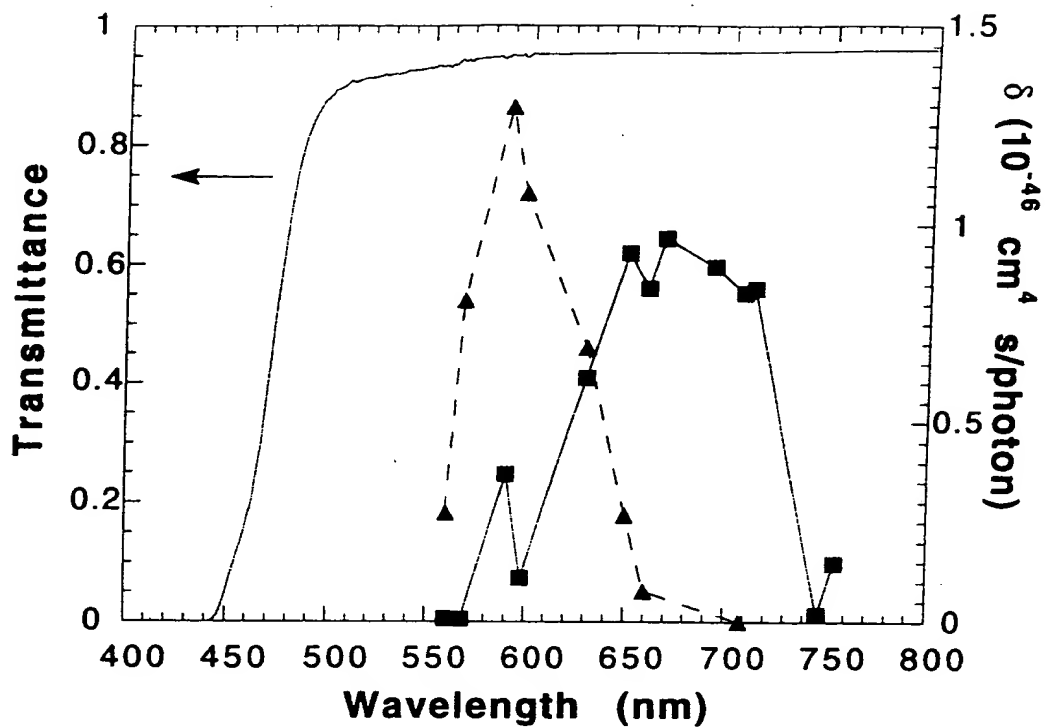
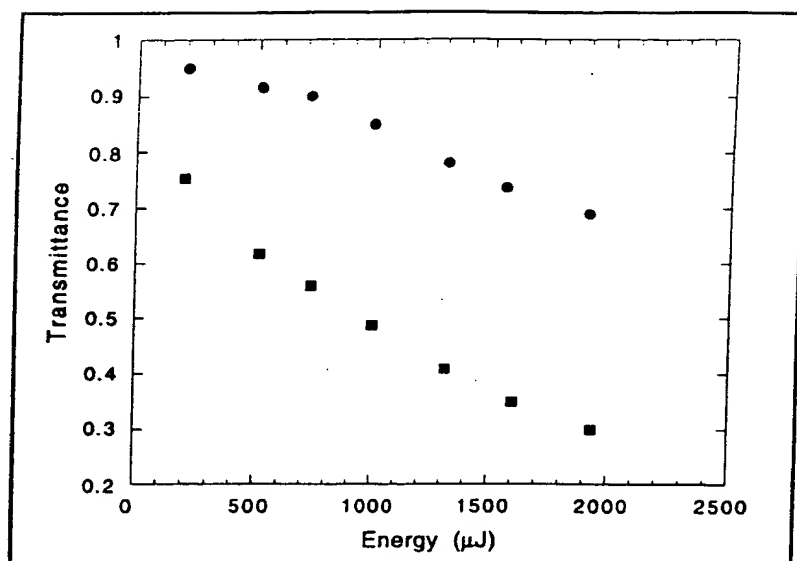


FIGURE 19

Linear transmission spectrum (solid line) of a mixture of 4,4'-bis(dibutylamino)stilbene and 4,4'-bis(diphenylamino)stilbene for a total molecular concentration of 0.1M.



Nonlinear transmission data showing enhanced two-photon absorption in a 1-(4-dimethylaminophenyl)-10-(4-dibutylaminophenyl)-deca-1,3,5,7,9-pentane (squares) as compared to the stilbene-like BDAS (circles). Measurements were performed at 598 nm using 0.01M solutions.

FIGURE 20

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